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Recent innovations in the phase-field modeling and computation

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In computational mechanics, the recent years have witnessed the emerge of the phase-field method (PFM) as a powerful tool that can be coupled with well-established approaches, such as continuum mechanics, computational fluid dynamics and biomechanics to solve a wide range of challenging engineering problems. This can be seen, for instance, in the modeling of brittle and ductile fracture, hydraulic fracture modeling in fluid-saturated or unsaturated porous media, phase-change materials as free or pore materials, application with topology optimization, and recently phase-field fatigue failure and corrosion. This minisymposium provides a forum for the discussion and exchange of ideas related to new advances and applications of the phase-field approach in engineering. It welcomes contributions both from the theoretical, experimental and computational points of view and is intended as a fruitful moment of interdisciplinary exchange of ideas.